We have no right, he thinks, to regard the functional disturbances which take place in single organs during fever, as the consequence of the fever. Fever is a symptom, with which the other pathological phenomena, as disturbances of the nervous system, of the circulatory apparatus and of nutritive changes, occur as coördinate symptoms, and the occurrence of all these single symptoms is the acute affection.

He has also made extensive researches in the acute infectious diseases as to the nutritive changes, the changes of the blood in fever, the circulatory disturbances, and those of the organs of secretion. In these he was assisted by Dr. Minkowski, who, in examining the blood of fevered dogs, found no constant changes in the blood disks. But he found in the same blood an abnormal acid—fermentable lactic acid. Naunyn also made experiments on the excretion of urine and on the occasional presence of carbonate of ammonium in fevered persons. In one case of petechial typhus, he found, on the second day after the crisis, ninety-one grams of urea, and in a second case, on the third and fourth days after the commencement of the fever, one hundred and sixty grams. Nothing conclusive was found as to the presence of carbonate of ammonia in the blood.

After discussing the nature of the febrile process, Naunyn develops the grounds upon which he recommends the hydriatic treatment of fever, and the rules by which one should be guided. He restricts the cold-water treatment (except in cases of insolation and intense hyperpyrexia) entirely to typhoid fever, as statistics have not yet shown that it has a favorable influence upon the course of other acute febrile diseases. But other antipyretics, as salicylate of soda and quinine, never act so well in typhoid fever as the cold-water treatment. The rules which he gives for this treatment, in the course of typhoid fever, are mainly as follows: He prescribes complete baths only, dividing them into: 1, cold baths, between 72.5° and 81.5° Fahr.; 2, lukewarm, between 81.5° and 90.5° Fahr.; 3, warm baths, between 90.5° and 95° Fahr. Typhoid fever patients should be placed in the bath, as a rule, as soon as the temperature in the axilla reaches 103.1° Fahr. The frequency of the baths should depend upon the temperature of the patient. The temperature should be taken every three hours, and a bath given. Baths of 77° Fahr. are most frequently used at first, and then of 83.2° or 86° Fahr., but never under 72.5°. The patients should be bathed at night as well as during the day. The cold bath should last from five to ten minutes, the lukewarm from ten to fifteen, according to the susceptibility of the patient. After the bath warm wine or grog should be given. If baths at these temperatures have no favorable effect, and the patient cannot be warmed and shows symptoms of collapse, the bath should be 4° or 5° higher. If the temperature does not fall sufficiently with baths at this temperature, or if it soon rises again after the bath, the water may be made somewhat cooler, or the patient may be bathed oftener, and before the temperature reaches 103.1° Fahr.

In severe cases of typhoid fever, with low temperature and pronounced general symptoms, the patient may be bathed with advantage if the axillary temperature reaches 102.2°. In some cases also, cases of violent delirium, warm baths may be given between the cold ones, generally in the afternoon between 6 and 8 P. M. The influence of these warm baths is, as a rule, very good. In connection with the bath-treatment, Naunyn places great reliance upon a careful dietary regimen.—*Centralb. für klin. Med.*, Sept. 13, 1884.

An Analysis of Cases of Diphtheria.

At a recent meeting of the Berlin Medical Society, Dr. Henoch read a paper on diphtheria, as observed in the Charité Hospital in the years 1882 and 1883, the full text of which is to be published in the next "Charité-Annalen." Exclusive of doubtful cases of angina, so-called scarlatinal diphtheria, and idiopathic croup, no fewer than 319 cases of the disease were observed; 216 of these were between the ages of two and six years. The mortality was very high—viz., 208—particularly in the first three years of life, for only 17 out of 118 attacked in this period recovered. This high mortality was ascribed partly to the "genius epidemicus," partly to the unsanitary surroundings of the sick, and to the fact that many of them were tuberculous and of the lowest class. In 145 cases the larynx was implicated, and 129 of these succumbed; of the remaining 174 cases, 79 died. Tracheotomy was performed in 138 cases, with only 16 recoveries—*i. e.*, 11½ per cent.; but 17 of these deaths were due to the supervention of scarlet fever. Of 66 cases tracheotomized in the first three years of life only 2 survived; death being almost invariably due to croupous bronchitis or bronchopneumonia; but occasionally to erysipelas of the wound and diphtheritic collapse. On an average the greatest danger to life was from the second to the fourth day after the operation. Speaking of the associated conditions and symptoms, Dr. Henoch said that, scarlatinal cases excluded, cutaneous eruptions were rare. In three cases a diffuse ulticaria-like erythema was noted over the nates and extensor surfaces of the extremities. Swelling of the submaxillary glands was constantly observed; but except in highly malignant cases it did not pass on to suppuration. In no case—except one doubtful scarlatinal one—was there swelling of joints; nor endocarditis, which was never found post-mortem. Albuminuria was most common, and if it reached an amount of about one-third or more was regarded as of bad prognostic significance; for in such a case it indicated either intense blood-poisoning or nephritis, which *per se* was an element of danger even after the diphtheria had passed away. Dropsy, however, rarely occurred, and uræmic symptoms were never observed. This nephritis, which could hardly be considered a true sequel, was frequently associated with cardiac debility, the occurrence of inflammations, and diphtherial paralyses. The use of corrosive sublimate as a gargle, of arsenic and iron, and of papayotin in serious cases, was advocated.—*Lancet*, Nov. 29, 1884.

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The Symptoms of Rickets considered in relation to their Anatomical Origin.

M. KASSOWITZ, in an article in the *Jahrbuch für Kinderheilkunde*, Bd. xxii. p. 60, says that the most striking feature in the microscopic anatomy of rickets is the hyperæmia and increased vascularity of all the tissues, and especially of those in which the growth of the young bone is going on. It is to be seen in marrow, cartilage, and periosteum, as well as in the bone itself. Indeed, a new formation of bloodvessels takes place, and vessels are to be found in places where normally there are none. This increased vascularity must be considered the primary lesion out of which all the others arise. It acts in two ways: firstly, it disturbs the course of development of the growing bone; and, secondly, it sets up unhealthy processes within bone already formed. In the growing bone excess of nutritive material causes excessive proliferation of cartilage cells, and a consequent loss of firmness in the cartilaginous tissue: the cells are increased in size and number, and the matrix is also more abundant and softer than usual. There is also an increase, in the earlier stages of rickets, of the area of ossification; but the bone thus formed does not become thoroughly firm, because the involution of the vessels, which is a necessary process in the formation of healthy bone, does not take place. The result is a loosely-formed bony tissue wanting in compactness and solidity. In the bone already formed, the hyperæmia of the surrounding tissues has an equally disastrous action; the normal processes of absorption and addition